### CHOLESTEROL & TRIGLYCERIDES

**Cholesterol** is a soft, waxy substance found in the lipids (fats) of your bloodstream and in all of your body's cells. It's an important part of a healthy body, but a high level of cholesterol is a major risk factor for serious health problems.

There are several kinds of cholesterol in your body. The two forms that make-up your total cholesterol are Low-Density Lipoprotein (LDL) and High-Density Lipoprotein (HDL). Here are some of the major differences between the two forms:

- **LDL is the bad cholesterol.** If too much LDL circulates in your blood, it may build-up in the artery walls and block blood flow. Blocked arteries in the heart can cause a heart attack. Blocked arteries in the brain can cause a stroke.

- **HDL is the good cholesterol.** Medical experts believe that HDL helps to lower the amount of bad cholesterol in your body. High levels of HDL could lower your risk of a heart attack or stroke.

**Triglycerides** are the most common type of fat in your body and are a major source of energy. Similar to other fats, a high level may indicate a health problem like high cholesterol, weight concerns, or diabetes.

#### Tips to Lower Your Cholesterol and Triglycerides

- Reduce the saturated fat in your diet. Eat less meat and fried snacks. Also try non-fat or low-fat dairy products.
- Reduce the cholesterol in your diet. Eat less eggs and red meat.
- Increase the fiber in your diet. Enjoy oats, barley, black beans, peas, and many fruits and vegetables.
- Maintain a healthy, lean body weight.
- Quit or never start smoking.
- Exercise regularly. Try walking 5-6 days a week.

**NOTE:** Currently there are no established ranges for TC/HDL ratio; however, some experts have suggested that the goal for the ratio is a value <4.5, and a value >6 increases an individual’s risk for heart disease.

### GLUCOSE

**Glucose** is one of the most important carbohydrates in the body. Its most important function is to provide energy by transporting sugar in your blood. Abnormally high levels of glucose could point to serious health problems, including diabetes.

**Diabetes** is diagnosed when your body does not produce or properly use **insulin**, a hormone that is needed to convert sugar, starches, and other food into energy. There are multiple forms of diabetes, and here are some of the fundamental differences:

- **Type 1 Diabetes** results from the body's failure to produce insulin. When this occurs, your body is not able to produce energy. Since insulin is essential for normal metabolism, people with Type 1 Diabetes need to constantly monitor and control their blood glucose levels with insulin injections.

- **Type 2 Diabetes** results from your body's failure to use insulin correctly. This type of diabetes is most common and often referred to as the milder form of diabetes. Since people with Type 2 Diabetes can still produce some insulin, glucose levels can usually be managed by a controlled diet and oral medications.

**Pre-Diabetes** is a condition that occurs when a person's blood glucose levels are higher than normal, but not high enough to indicate Type 2 Diabetes.

#### Tips to Control Your Glucose Level

- Maintain a healthy weight
- Increase your physical activity
- Limit calories and saturated fat in your diet

### WHAT COULD THE RESULTS INDICATE?

<table>
<thead>
<tr>
<th>Total Cholesterol Level</th>
<th>Desirable</th>
<th>Borderline – High Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 200 mg/dL</td>
<td>200 – 239 mg/dL</td>
<td>240 mg/dL and over</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>LDL Cholesterol Level</th>
<th>Optimal</th>
<th>Near Optimal/Above Optimal</th>
<th>Borderline High</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100 mg/dL</td>
<td>100 – 129 mg/dL</td>
<td>130 – 159 mg/dL</td>
<td>160 – 189 mg/dL</td>
<td>190 mg/dL and above</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HDL Cholesterol Level</th>
<th>Normal</th>
<th>Borderline High</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Male 40 – 50 mg/dL</td>
<td>&lt;40 mg/dL</td>
<td>60 mg/dL and higher</td>
<td></td>
</tr>
<tr>
<td>Avg. Female 50 – 60 mg/dL</td>
<td>&lt;50 mg/dL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Triglyceride Level</th>
<th>Normal</th>
<th>Borderline High</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 150 mg/dL</td>
<td>150 – 199 mg/dL</td>
<td>200 – 499 mg/dL</td>
<td>500 mg/dL</td>
<td></td>
</tr>
</tbody>
</table>

**FASTING GLUCOSE LEVEL**

- **NORMAL** 60 - 99
- **PRE-DIABETES** 100 - 125
- **DIABETES** 126 and higher

**NON-FASTING GLUCOSE LEVEL**

- **NORMAL** < 140
- **BORDERLINE HIGH** 140 - 200
- **DIABETES** > 200

*Random (non-fasting) blood glucose level – Diabetes is suspected if higher than 200 and accompanied by the classic symptoms of increased thirst, urination, and fatigue. Consult with your Physician for more information.*